



## 13<sup>th</sup> European Bird Curators Meeting Programme

DAY 1: TUESDAY 29<sup>TH</sup> OCTOBER 2024

TIME	ACTIVITY/TITLE	SPEAKER	LOCATION
10:00	<b>Registration</b> World Museum opens to the general public at 10am so please use the main entrance on William Brown Street (L3 8EN) to the left of World Museum's large stone steps		Treasure House Theatre Foyer (Level 1)
10:20	Welcome Housekeeping	Laura Pye, Director of National Museums Liverpool	Treasure House Theatre
10:40	Keynote talk: The bird collections of National Museums Liverpool	Clem Fisher, Emeritus Senior Curator of Vertebrate Zoology	
11:40	Group photo		Outside on World Museum's steps
12:00	Lunch and poster session <ul style="list-style-type: none"> <li>• How to move a collection of 11,500 soiled and damaged historic bird mounts?</li> <li>• The bird collection of James Maurice Harrison in the Natural History Museum Vienna</li> <li>• Spirit collections: the challenges of historic specimens</li> <li>• Historical Curiosities in the collection of the Museum Koenig</li> <li>• Extending the specimen further: Avian cell cultures at the Museum Koenig</li> <li>• Protocols for skeleton preparation</li> </ul>	Sylke Frahnert, Pascal Eckhoff Renate van den Elzen, Sven Renner Judith White  Till Töpfer, Devon Putnam Till Töpfer, Devon Putnam Jessica Martínez-Vargas	Board Room (Ground Level)
13:00	Historic collections, new opportunities	Pepijn Kamminga	Treasure House Theatre  (Chair: Alex Bond)
13:20	The origins of specimens from the founding period of the ornithological collection at the Museum für Naturkunde Berlin - an interdisciplinary provenance research project	Sylke Frahnert	
13:40	Saving the Colebrook-Robjent Ornithology Collection – a successful resolution	Douglas G. D. Russell	
14:00	Extinct and endangered bird species in a small museums collection	Jakob Pöhacker	
14:20	Extinct & endangered birds: a revised list for collections	Mark Adams	
14:40	Coffee break		Treasure House Theatre Foyer
15:00	Reimagining historic bird collections to inspire hope in the climate emergency	Sarah Marden	Treasure House Theatre  (Chair: TBD)
15:20	The birds of Bolton	Lauren Field	
15:40	Work as a student in scientific illustration	Sonal Mistry	
16:00	The challenge and opportunity to grow bird collections from 'born digital' soundscape recordings	Karen Rowe	
16:30	<b>Collections tours: Entomology, Geology or Vertebrate Zoology stores</b> Sign up required  World Museum's public galleries and entrance closes at 5pm	Tony Hunter (Entomology) Wendy Simkiss, Emma Gill (Geology) Olivia Beavers (Vertebrate Zoology)	Leaving from Treasure House Theatre Foyer

18:30	<b>Conference Dinner</b> Separate ticket required		Café (Ground Level)
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**DAY 2: WEDNESDAY 30<sup>TH</sup> OCTOBER 2024**

TIME	ACTIVITY/TITLE	SPEAKER	LOCATION
10:00	<b>Registration</b> World Museum opens to the general public at 10am so please use the main entrance on William Brown Street (L3 8EN) to the left of World Museum's large stone steps		Treasure House Theatre Foyer (Level 1)
10:20	SIGNIFY: Ornithological re-collections of Singapore's historical biodiversity	Lydia Gan	Treasure House Theatre  (Chair: Douglas Russell)
10:50	Global extinction of Slender-billed Curlew <i>Numenius tenuirostris</i>	Alex Bond	
11:10	Sperm as a speciation phenotype	Jan Terje Lifjeld	
11:30	Presence of arsenic and other potentially harmful elements detected on bird specimens with handheld XRF scanner	Lars Erik Johannessen	
11:50	Use of NIR spectrometry for dating birds and mammals skeletons: some preliminary results	Javier Quesada	
12:10	Lunch and poster session		Board Room (Ground Level)
13:10	Un-picking the bird skin type collection at OUMNH	Robert Douglas	Treasure House Theatre  (Chair: TBD)
13:30	Overview of bird descriptions by Joannes Antonius Scopoli (1723-1788): current status, type collections and perspectives	Al Vrezec	
13:50	Towards a catalogue of type specimens held in European bird collections	Till Töpfer, Guy Kirwan	
14:10	The Bird Name Atlas project	Alice Cibois	
14:20	Fantastic birds and where to find them	Hein Van Grouw	
14:50	Coffee break		Treasure House Theatre Foyer
15:10	Demonstration of making a spread wing specimen	Augie Kramer	Treasure House Theatre
15:40	Closing - The 14th European Bird Curators Meeting - Thank yous	John Wilson	
16:00	<b>Collections tours: Botany, Geology or Vertebrate Zoology stores</b> Sign up required	Wendy Atkinson (Botany) Wendy Simkiss, Emma Gill (Geology) Olivia Beavers (Vertebrate Zoology)	Leaving from Treasure House Theatre Foyer
16:00	<b>Informal gathering</b> Catalogue of type specimens held in European bird collections discussion  World Museum's public galleries and entrance closes at 5pm	Guy Kirwan	Treasure House Theatre

**DAY 3: THURSDAY 31<sup>ST</sup> OCTOBER 2024**

TIME	ACTIVITY/TITLE	SPEAKER	LOCATION
8:30	<b>Excursion to RSPB Dee Estuary Nature Reserve, Burton Mere Wetlands, Puddington Lane, Burton, Cheshire, CH64 5SF</b> Separate ticket required  Lunch is not included with the excursion but there is a café where you can purchase food and drink	Daniel Trotman, Visitor Operations Manager	Leaving from World Museum's steps, William Brown Street

### **Historic collections, new opportunities**

Pepijn Kamminga (Naturalis Biodiversity Center, the Netherlands)

All bird specimens in the Naturalis are digitally registered, which provides new opportunities for data enrichment, provenance research and multidisciplinary studies using collections in new ways. Together with photography, genetic analyses and other sources we can now think of Digitally Extended Specimens (DES) where we can link additional information (archival data, publications, CT scans, SEM data etc.) from new studies to particular specimens. Naturalis aims to have all its specimen data fully accessible and collaborates within the DiSSCo programme to enhance the (digital) collection and support the research community. Since the beginning of Naturalis Biodiversity Center, the Netherlands in 1820 as 's Rijks Museum van Natuurlijke Historie (RMNH), the bird collection has grown to over 401.000 specimens, ranging from skins, wings, skeleton to wet collections and tissue samples. The collection has evolved from a private cabinet to a taxonomic, and later a multidisciplinary scientific resource. Catalogues of the type specimens have not been updated since they were compiled over thirty years ago. New insights have been integrated into an updated type catalogue of the non-passerines in the Naturalis collection.

### **The origins of specimens from the founding period of the ornithological collection at the Museum für Naturkunde Berlin - an interdisciplinary provenance research project**

Sylke Frahnert, Jürgen Fiebig, Meike Knittel (Museum für Naturkunde Berlin)

The historic holdings of the ornithological collection of the Museum für Naturkunde Berlin, founded in 1810, are of particular scientific interest. At the same time these specimens have the worst record of their collection origin. The example of the Berlin Kunstkammer which was housed in the Berlin Palace until the 19th century is used to demonstrate what information can be gathered on these early specimens with mostly unknown origin. By comparing historical collection catalogues, the history of the thirty surviving specimens of the Kunstkammer could be traced back to their entry into the collection. The historical documentation of the Kunstkammer provided information about their previous history as purchases and donations from private collections in the last decade of the 18th century. However, the origin of the individual pieces remained unclear, as we did not find any lists of specimens from these individual collections. We have therefore tried new ways of obtaining further information about the origin of the specimens based on their structure and material composition. In particular, we investigated whether the taxidermy style and the wiring used can help to assign the specimens to historical collections, taxidermy studios or the period of production. The aim of this contribution is to demonstrate the advantages and limitations of such an approach, which combines the analysis of physical, photographic and written documentation.

### **Saving the Colebrook-Robjent Ornithology Collection – a successful resolution**

Douglas G. D. Russell (Natural History Museum, UK), Maggie Mwale (Livingstone Museum, Zambia)

Major John F. R. Colebrook-Robjent (1935-2008) was a leading 20th-century oologist in Africa. After his death, his extensive collection of bird eggs, skins, and manuscripts was bequeathed to the Natural History Museum (NHM) in London. The Zambia Wildlife Authority - ZAWA (now Department of National Parks and Wildlife - DNPW), established to manage the country's wildlife, denied export due to insufficient documentation. After further inquiries in 2013, ZAWA reiterated its decision to retain the collection in Zambia, designating the Livingstone Museum as its recipient. However, when operational challenges led to ZAWA's dissolution in 2015, the collection's fate remained uncertain. The pandemic contributed to further delays until 2022, when a joint effort led by staff from the Livingstone Museum, and National Museums Board, supported by NHM successfully relocated the collection from Choma to Livingstone. Now under the Livingstone Museum's care, the collection remains a vital ornithological resource in Africa. 15 years after Colebrook-Robjent's death, the outcome is a strong, modern partnership between NHM and the Livingstone Museum, fostering a hub for ornithological research in Southern Africa. This collaboration has ultimately offered a promising future for ornithological studies in the region, centred in Livingstone, near the iconic Victoria Falls.

### **Extinct and endangered bird species in a small museums collection**

Jakob Pöhacker (Haus der Natur Salzburg)

The museum Haus der Natur in Salzburg (Austria) owns a small bird collection including 2.935 skins, 2.700 mounts and 344 skeletons. However, this collections contain important specimens of extinct or endangered species. Highlights include a skeleton of a dodo (*Raphus cucullatus*), a skin of a slender-

billed curlew (*Numenius tenuirostris*) and a mount of an imperial woodpecker (*Campephilus imperialis*). The origin and history of these specimens were investigated in the course of analysing the collections and the history of the museum. The skeleton of the dodo was analysed using computer tomography to verify the authenticity of the bones. Although the museum's books do not contain any precise information on the origin, several clues reveal the history of the skeleton and it is possible to reconstruct how such a rare object found its way to Salzburg. In this talk, we will present the most important bird specimens in the collection and discuss their significance for the museum.

### **Extinct & endangered birds: a revised list for collections**

Mark Adams, Alex Berryman (Natural History Museum, UK)

At the first European Bird Curators meeting 'Why Museums Matter', held in 1999, a workshop discussion highlighted the need for an inventory and catalogue of international holdings of extinct and endangered ('E&E') species held in museums. To achieve this, a baseline species list was fundamental. Such a list was compiled by Natural History Museum and BirdLife International (BirdLife) staff, and later published in the conference's proceedings, 2003. The original list was compiled using data from BirdLife's (2000) Threatened birds of the world with filters set to remove species with large, stable population sizes, thereby retaining only species unlikely to yield new specimens and keeping the list at a level short enough for practical management of collections. Over the past two decades, the volume of information available on bird populations has greatly increased, and the pressures (threats) and responses (conservation action) acting on species have altered. In combination with shifting taxonomy, the list of threatened species has therefore inevitably changed since the original E&E list was published. In response, we produce an updated list based on 2023 BirdLife's data, following very closely the original filters applied. Almost predictably, the total number of species listed has increased; from 481 to 629.

### **Reimagining historic bird collections to inspire hope in the climate emergency**

Sarah Marden (The Box, Plymouth)

Two recent gallery redisplays of bird collections at The Box, Plymouth, have focused on positive action taking place across our communities to address the climate emergency. The Box is one of the UK's largest new multi-disciplinary arts and museum spaces, housing Plymouth's most important heritage collections on one site. These include a virtually complete list of mounted and cabinet skin British birds donated by significant individual collectors from the 19th-early 20th century. These new displays reflect the mission of The Box to use the city's historic cultural collections to explore the pressing issues of our age and imagine new futures. 'Climate Cases' displayed cabinet skins in a striking aesthetic that raised awareness of the significant impact of avian flu on our globally important seabird populations. A second case highlighted changes in nesting behaviour as a result of climate change. Climate Cases presented a solutions-based focus to these problems. A new major exhibition for 2024, 'Planet Ocean' includes a spotlight on the effects of plastic entanglement and ingestion in local bird species. This exhibition links collections with pioneering contemporary research by local partners including the Marine Biological Association and International Marine Litter Research Unit at the University of Plymouth.

### **Birds of Bolton**

Lauren Field (Bolton Museum)

Birds of Bolton, a summer exhibition, launched on 29 June 2024. This exhibition was built around a recently acquired collection of works by a previous Keeper of Natural History at Bolton Museum called Eric Gorton. Eric was a naturalist, taxidermist, and artist and was also the driving force behind building the museum's significant bird skins collection. Lauren will detail the development of the exhibition through this donation, and explore the ornithology collection at the museum, looking at how the two link together. The exhibition encourages visitors to look closer at local wildlife through the lens of art and the museum's collection, encouraging bird watching and recording, and field sketching both in the gallery, and outside the museum. Whilst sharing the story of highlighted individuals, the Bolton Field Naturalists' and ex-curators of note, Lauren will also share the purpose of this, how it was achieved and, of course, champion the local flora and fauna of Bolton.

### **Work as a student in scientific illustration**

Sonal Mistry (Independent Researcher)

For the upcoming meeting, I would like to present my work as a student in Scientific Illustration, who would like to collaborate with museum collections and esteemed curators, to increase appreciation for the boundless treasures from around the world. Showcasing my work digitally, accompanied by

original examples of my artwork, I intend to demonstrate how I collaborated with the World Museum's bird collections, for one of my recent assignments. Birds, with their enchanting allure, hold a special place in my heart, serving as my muse; however, my reverence for the wondrous fabric of nature, knows no bounds and drives me to advocate for its preservation and admiration. In my aim to harmonise art and science, I strive to create visually stunning and educational illustrations that pay homage to the rich tapestry of our natural world. With this presentation, I aim to position myself as a catalyst for bridging the gap between art and science, offering a new perspective that celebrates the diversity and magnificence of our planet's flora and fauna.

### **The challenge and opportunity to grow bird collections from 'born digital' soundscape recordings**

Karen Rowe, Kevin C. Rowe, Amy L. Adams (Museums Victoria Research Institute)

Natural history collections preserve our biological heritage and serve as the record of biodiversity through time. While species occurrences have historically been based on physical specimens, digital observational records are increasingly represented in collections. For example, automated sound recorders are increasingly used to survey for birds through the capture of soundscapes. These digital and verifiable records can complement 'traditional' specimen records housed in museums. Museums Victoria (MV; Melbourne, Victoria, Australia) houses more than 116,000 bird specimen records including traditional ornithological preparations, taxidermy mounts, and tissues. Since 2012, MV has increased efforts to capture digital occurrence records of birds by recording more than 30 million minutes of soundscape from across the globe. To date, few of these recordings include species identifications, although our capacity to assign ids to bird sounds is expanding rapidly – we aim to double the number of records in our collection within four years. We present our approach to archiving and registering these recordings to enable 1) flexible searching for varying levels of species identification; 2) forward compatibility to facilitate future machine learning approaches to automate species ids; and 3) equitable and public access to occurrence records derived from these recordings as well as the recordings themselves. This approach will enhance the provisioning of occurrence records to data aggregators (including the Atlas of Living Australia) and enable data-rich records for use in continental scale biodiversity research.

### **SIGNIFY: Ornithological re-collections of Singapore's historical biodiversity**

Lydia X Gan, Deon JH Lee, Paul YC Ng, Tricia JY Cho (Lee Kong Chian Natural History Museum, Faculty of Science, National University of Singapore)

For over two centuries, naturalists have collected zoological specimens from Singapore and its surrounding waters, leading to extensive collections of its biodiversity housed in natural history museums worldwide. The SIGNIFY (Singapore in Global Natural history museums Information Facility) project, an initiative of the Lee Kong Chian Natural History Museum (LKCNCNHM) at the National University of Singapore, endeavours to trace the footsteps of these specimens held in custodian institutions. The project aims to collate, document, digitise and make publicly available online approximately 10,000 scientifically and historically significant zoological specimens collected from Singapore since its founding in 1819. This enhances the scientific value of collections through provision of high-resolution images and accompanying metadata. The project also spotlights Singapore's natural heritage by studying and sharing about the stories (i.e., collectors, journeys, and their circumstances) behind the specimens. This talk outlines the background, workflows, and findings behind the SIGNIFY project, using notable ornithological examples that have been uncovered and digitised. Human elements in stories behind specimens make museum materials more relatable and accessible, optimising their potential and reach in educating and promoting appreciation of Singapore's historical biodiversity and natural heritage.

### **Global extinction of Slender-billed Curlew *Numenius tenuirostris***

Alex Bond, Graeme Buchanan, Ben Chapple, Alex Berryman, Justin Jansen (Natural History Museum, UK)

In the current biodiversity crisis, conservation efforts are often focussed on extinction prevention. However, it can be difficult to determine if a species is extinct, especially if the species has an extensive range or is poorly known. The breeding range of the Critically Endangered Slender-billed Curlew (*Numenius tenuirostris*) is uncertain, and the species has an extensive non-breeding range that spans central Asia, eastern Europe, the Middle East, and the Mediterranean basin. There have been no confirmed sightings of the species since 1995. In this time extensive and intensive searches for the species have continued. Using an IUCN extinction probability framework and Bayesian extinction date estimation, we incorporate potential threats to the species, search effort and past records (museum specimen and confirmed and unconfirmed sightings, all of which are primarily from

its wintering range) to assess the probability of extinction, and a potential year of extinction. The model indicates that there is a 96.9% to 99.9% confidence that Slender-billed Curlew is extinct, classing it as Extinct according to IUCN Red List guidelines. Additional modelling indicates it likely went extinct in 2011. While several threats to the species have been suggested, those that definitively drove the species to extinction will never be known. Other species of *Numenius* are under a range of pressures, and many are recognised as globally threatened. To maximise the chances of the continued survival of all shorebird species, we advocate flyway-scale coordination and action, and caution against complacency even for seemingly widely distributed but threatened taxa in Europe.

### **Sperm as a speciation phenotype**

Jan T. Lifjeld (Natural History Museum, University of Oslo)

Speciation phenotypes are traits whose divergence contributes to reduced gene flow during speciation. In this talk I explore the hypothesis that rapid sperm length divergence promotes speciation in songbirds. Songbirds are characterized by a wide range of species-specific sperm lengths. There are also multiple examples of geographic variation in sperm length within species, which suggests that this trait evolves rapidly. Furthermore, songbirds vary in the extent of female promiscuity, which exerts selection on sperm length variance in a population. In a comparative study of 20 populations pairs at different stages of the speciation continuum, I found that sperm length diverged faster, in terms of reduced overlap between populations, in more promiscuous species. Reduced overlap was caused by smaller variance in sperm length in promiscuous species, and not by different evolutionary rates of the mean sperm length. Since female promiscuity promotes non-overlapping sperm length distributions in allopatry and exerts selection on the trait, conspecific sperm precedence based on sperm length can be expected if and when populations make secondary contact. Thus, female promiscuity may promote prezygotic isolation through sperm length as a speciation phenotype. I encourage more studies of sperm length variation and conspecific sperm precedence in hybrid zones of songbirds with a promiscuous mating system.

### **Presence of arsenic and other potentially harmful elements detected on bird specimens with handheld XRF scanner**

Lars Erik Johannessen (Natural History Museum, University of Oslo)

Using a handheld XRF scanner, 132 bird specimens, including study skins, mounts, skeletal objects and eggs, were scanned to analyze the presence of arsenic and other potentially harmful elements. The specimens were selected to cover the main object types and time periods represented in the collection, from all parts of the world, and also to include specimens from a selection of different providers. Most categories were represented by ca. 10 specimens, but for Norwegian study skins ca. 50, specimens were included per time period. The results are still being analyzed, but some trends are emerging; skins and mounts contain ample amounts of arsenic, while bones and eggs seems to be generally "clean"; arsenic levels in skins and mounts are higher the older the specimen is, and is generally absent in specimens from ca. 1975 or later; there seem to be some regional differences in the amount of arsenic present, with North America topping the list; very small specimens tend to have high levels of arsenic. Values for mercury and lead are much lower, and mercury exhibits a similar trend over time as arsenic.

### **Use of NIR spectrometry for dating birds and mammals skeletons: some preliminary results**

Javier Quesada (Natural Sciences Museum of Barcelona)

Old specimens from zoological collections are crucial for understanding many biological processes as they offer historical insights into the natural world's diversity. To be useful, these specimens must include information such as species, sex, age, and, importantly, the date and location of collection. When this information is lost (e.g. war, neglect, etc) the specimens' value is compromised. While biological data can be recovered through expertise or genetics, determining the date of collection is particularly challenging. Traditional methods like historical research are time-consuming, and isotope analysis techniques (e.g., C14, Sr15) involve sample destruction and/or do not work well with recent specimens (<150 years). This study presents preliminary results on using NIR spectrometry, a non-destructive and easy-to-perform method, for dating mammal and bird skulls. We analysed two groups of specimens with known collection dates: recent (~ 10 years old) and old (~ 100 years old). Our results indicate that NIR spectrometry effectively distinguishes between these age groups when using discriminant techniques (DCA, PLS-DA). However, further analysis must be addressed to identify sources and parameters of variation in samples and in the analytical protocol. NIR spectrometry shows promising results for classifying groups of different age specimens in zoological collections, offering a potentially valuable tool for recovering historically significant specimens. Nonetheless, additional research is necessary to fully validate this method.

## **Un-picking the bird skin type collection at OUMNH**

Robert Douglas (Oxford University Museum of Natural History)

I have been going through the collections and archives at OUMNH working towards producing a type catalogue of bird skins, something we have never had. Using the specimens and literature in order to determine the type status, collections data and identification has been equal parts interesting, confusing, frustrating and enjoyable! In this talk, I will be going over the methods I have employed to determine the historic identity and type status of specimens bearing the label of type. I will use examples from the work to discuss dodgy descriptions lacking now critical information. The temporal troubles that arrive from publications from the early 1800's leading to duplicate descriptions and junior synonyms en masse. The difficulties arising from missing catalogues, unclear numbering and tricky to read archive material. But also, the subjects of some beautiful natural history artwork and long forgotten holotypes. I will also give a more holistic view of our type collections and some of its strength's, that I hope will encourage future research. Lastly, I will touch on the re- housing, re- packing, digitisation and cataloguing of these important specimens.

## **Overview of bird descriptions by Joannes Antonius Scopoli (1723-1788): current status, type collections and perspectives**

Al Vrezec (Slovenian Museum of Natural History & National Institute of Biology)

As the author of at least 175 new bird taxa, 59 of which are still valid today, Joannes Antonius Scopoli (1723-1788) is one of the most important creators of ornithological history in Europe and worldwide, yet he is often overlooked because his ornithological legacy is little researched and known. As a correspondent of Linnaeus, he influenced the early development of classification of organisms. His most important scientific work was carried out between 1754 and 1769 in Carniola (now Slovenia) and led to numerous publications. These include studies on birds published in *Annus I. Historico Naturalis, Descriptiones Avium* (1769), while later studies were devoted to the revision of published data. Scopoli's type specimens were kept in at least four collections: (1) own collection in Idria (Slovenia), (2) the collection of Count Francesco Annibale Della Torre in Vienna (Austria), (3) the Imperial ZOO in Vienna (here Scopoli observed only living specimens) and (4) the collection of Pierre Sonnerat in Paris (France), which Scopoli used only indirectly, as he made his descriptions only on the basis of Sonnerat's illustrations and texts and not by examining the specimens. The lecture will be given on the occasion of the 300th anniversary of J.A. Scopoli's birth.

## **Towards a catalogue of type specimens held in European bird collections**

Till Töpfer (Leibniz-Institut zur Analyse des Biodiversitätswandels, Bonn), Guy Kirwan, Alex Bond, Hein van Grouw (Natural History Museum, Tring)

Type specimens represent the crucial physical reference for any scientific bird name, but type material is scattered widely across the globe and, to date, there is no comprehensive source documenting the presence and condition of all bird type specimens, as well as the associated information on nomenclature and validity of individual names. Indeed, many collections (even at large and important institutions) lack a published type catalogue. Furthermore, where available, such works may exist only in printed form, be only partial in extent, or are now outdated and incomplete. In this presentation, we will explore the avenues available for creating a comprehensive (online) database/data portal for bird type specimen information, to serve as a standard and dynamic reference for collections-based, taxonomic and nomenclatural research. The challenges associated with assembling and maintaining such data will also be discussed. Nevertheless, the rewards are potentially significant including, most obviously, an obvious improvement in findability of, and access to, type specimens and associated data, but also an increase in cooperation between, and joint scientific studies of, various collections, as well as opportunities to provide greater integration between our community and umbrella-style projects like ZooBank, GBIF and Biodiversity Heritage Library. All of the feasible models necessitate a level of community-driven involvement if we are to achieve these goals; to this end, we seek ideas and collaboration from across the European bird collections community. Ultimately, such a project could serve as a pilot for even more far-reaching international-level collaborations.

## **The Bird Name Atlas project**

Alice Cibois, J.-C. Thibault, J.-F. Butaud, M. Walworth, R. Richter-Gravier (Natural History Museum of Geneva)

The Bird Name Atlas project brings together ornithological, traditional, and linguistic knowledge to compile an exhaustive list of vernacular bird names from Eastern Polynesia. This includes

comparisons of names from islands within the sphere of Polynesian languages influence. Our first results show that linguistic diversity of bird names does not always correspond to the biological diversity of the taxon: species-rich groups can have very similar names across archipelagos (for example, fruit doves), while a single species, like the white tern, may have a wide variety of Polynesian names across the Pacific. These variations may reflect certain traits of the birds, such as being resident (fruit doves) or marine (terns), but the erosion of traditional knowledge has also led to confusion between similar species. Names were gathered from 18<sup>th</sup>- and 21<sup>st</sup>-century publications and field transcriptions, complemented by interviews conducted during fieldwork in Eastern Polynesia since the 1970s. Although few names came directly from bird collections (i.e., labels), they offered invaluable insights into extinct species. Thus, while vernacular names are not always explicitly mentioned in the definition of the extended specimen concept, they could be integrated into an expanded approach that aims to include cultural and linguistic dimensions in collections.

### **Fantastic birds and where to find them**

Hein Van Grouw (Natural History Museum, UK)

Many enigmatic species have been described and named in the past, often based on a single specimen. Some of these species have even encouraged ornithologists to organize expeditions to find more specimens, but they never did. The bird collections of the NHM holds several of these unique specimens, each representing a rare species what was never seen again after the type specimen was collected, such as Vaurie's Nightjar, Nechisar Nightjar, and Double-banded Argus. With the current knowledge of colour aberrations, and DNA analyses, many of these 'species' have been unmasked as aberrant individuals of known species, or hybrids. In this talk it will be shown that some of these 'Fantastic Birds' are, in fact, fantasy species.

## **ABSTRACTS FOR POSTERS**

### **Spirit collections: the challenges of historic specimens**

Judith White (Natural History Museum, Tring)

The bird spirit collection at the Natural History Museum at Tring is comprised of c.18,000 specimens. Whilst the majority of the collection is well organised and labelled, there are also many older specimens, often over 100 years old, which can pose significant challenges. Faded, torn or missing labels, incorrect or mis-transcribed data, unidentified, misidentified, dissected, featherless or faded birds and unregistered specimens are frequently encountered, particularly amongst the historic collections. The bird spirit collection is yet to be databased and only since 1969 has there been a dedicated spirit register. Earlier specimen entries are dispersed throughout the Zoology and Aves registers from 1837 and searching through these for spirit specimens which either lack or have illegible registration numbers can be time consuming. These issues combined means that to answer a simple enquiry can often require extensive investigative work. A recent enquiry relating to our spirit collection holdings of Hawaiian birds highlighted many of these challenges. This poster presents the process of answering this enquiry and the steps being taken to address some of these issues.

### **The bird collection of James Maurice Harrison in the Natural History Museum Vienna**

Renate van den Elzen, Hans-Martin Berg, Paul Bates, Swen Renner (NMW Vienna)

Dr. James Maurice Harrison (1892-1971) was one of the last bird collectors in Europe. A medical doctor by profession, his private interest was predominantly in ornithology. In 1930 he founded his own museum in Sevenoaks, Kent (UK), which was continued by his two sons Jeffery G. Harrison (1922-1978) and David L. Harrison (1926-2015). He collected mainly in Kent until the 1980s, but also with colleagues in Switzerland, Bulgaria and Greece and the Harrisons had a lively exchange of specimens with friends and colleagues. To date the Harrison collection comprises approximately 22,000 specimens, thereof 19,300 skins. Harrison described (according to current knowledge) 25 taxa, mainly subspecies, and erected five neotypes (*Dryobates major praealpinus* von Burg 1921, *Phylloscopus t. trochilus* Linnaeus 1758, *Fringilla c. coelebs* Linnaeus 1758, *Emberiza c. citrinella* Linnaeus 1758, *Emberiza citrinella erythrogenys* Brehm, 1831). He and his sons were also active in nature conservation. They re-naturalized abandoned gravel pits to create large ponds for water birds close to Sevenoaks, UK, now part of the Sevenoaks Nature Reserve. Today, the Harrison Institute is a non-profit organization for biodiversity research in the tropics and subtropics. The bird skin collection was donated to the Natural History Museum Vienna in October 2022 and transferred in February 2023. A Harrison Bird Collection Catalogue and a Harrison Bird Type Catalogue are in preparation.



## **How to move a collection of 11,500 soiled and damaged historic bird mounts?**

Sylke Frahnert, Pascal Eckhoff (Museum für Naturkunde Berlin)

In order to carry out reconstruction work on a museum's hall, 11,500 historic mounts from the scientific bird collection in the Museum für Naturkunde Berlin had to be removed from their collection hall for an estimated period of five years. Most of the birds were collected in the 19th century, with some dating back to the 18th century. From 1890 to the present day, the mounts have been housed in the museum to be used for scientific purposes, suffering through building extensions and two world wars. The Second World War in particular was destructive for both the building and the specimens. The mounts were damaged and polluted, some were completely destroyed and several thousand were subsequently converted into scientific skins. The remaining specimens were very dirty and fragile, with varying degrees of damage. Within a year and a half, these specimens were completely removed from the collection hall. They were cleaned and repaired. Damaged pedestals were replaced, historical labels reattached and new labels with updated and enriched data were added. The so renewed specimens were photographed and placed in special wooden boxes. They will remain in these boxes during the reconstruction of the hall. This year, a special exhibition on the reconstruction of the museum and the renovation of the collections was opened on the basis of these boxes.

## **Historical Curiosities in the collection of the Museum Koenig**

Devon Putnam, Till Töpfer (Leibniz Institute for the Analysis of Biodiversity Change, Museum Koenig Bonn, Germany)

One of the joys of working with a well-established bird collection is the connection to history that sometimes can be made with some of the specimens. It can truly spark the imagination. What were the circumstances when that bird was originally found? What were the circumstances at that time? Who found it, and what was that person's historical significance? We present some of the historical specimens from the Museum Koenig that piqued our curiosity.

## **Extending the specimen further: Avian cell cultures at the Museum Koenig**

Till Töpfer, Devon Putnam, Camilla Di Nizo (Leibniz Institute for the Analysis of Biodiversity Change, Museum Koenig Bonn, Germany)

Many ornithological collections routinely take and store tissue samples for molecular or toxicological analyses alongside their bird specimens. At the Museum Koenig, we have expanded this approach by taking tissues from freshly dead birds to cultivate and cryopreserve cells. Cryopreserved viable cells are a "renewable" resource as they can be thawed, grown, and stored many times. Since cells provide high-quality DNA, RNA, proteins, and chromosomes, they have an enormous potential for applications in various fields such as biotechnology, toxicology, immunology, cytogenetics, and conservation. By doing so, our aim is to add scientific value to the specimens in our ornithological collection.

## **Protocols for skeleton preparation**

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Protocols for skeleton preparation have long considered the use of water maceration alone and the use of diluted potassium hydroxide (KOH). Initially, this second protocol appeared to be especially suitable for speeding up skeleton preparation of birds and other vertebrates. However, the preparation of small-sized or juvenile skeletons is often compromised by the use of KOH, since in excessive concentrations, even those established by protocols, this chemical product can damage bone tissue and even disintegrate the most fragile bones. Terrestrial isopods are crustaceans easy to keep in the lab, which have proved to be useful for the cleaning of small skeletons. As opposed to dermestid beetles, isopods do not pose a threat to collections in case of accidental release, since they die when not in a very humid environment. We present here some details and insights on the preparation of bird skeletons with these arthropods after using them at the Zoological Preparation Laboratory of the Natural Science Museum of Barcelona. We encourage bird curators to take into consideration this useful and environmentally friendly option to prepare bird skeletons for their collections.